

Phase I ESA Report for Brownfield Program enrollment

This guidance document provides a general overview of the Phase I Environmental Site Assessment (Phase I ESA) process and information about how to prepare a Phase I ESA report that best meets the needs of the Minnesota Pollution Control Agency (MPCA) Brownfield Program. It is intended for a general audience who may not be familiar with the content and purpose of a Phase I ESA, as well as for environmental professionals preparing to enroll a site in the MPCA Brownfield Program. Most services requested from the MPCA Brownfield Program require, at the time of program enrollment, submittal of a Phase I ESA report completed within the last year. This requirement reflects the importance of the report as a foundation for program decisions about liability, assurance letters, potential development plans, and the need for and scope of an environmental investigation.

I. What is a Phase I ESA?

A Phase I ESA evaluates readily available information from a variety of standard sources about historical use(s), regulatory involvement, and the current condition of a site for the purpose of identifying potential *recognized environmental conditions* (REC). The Phase I ESA report provides conclusions and recommendations based on the information collected. Sampling of soil, groundwater, and/or soil vapor is not typically conducted during a Phase I ESA; the evaluation is primarily a desktop review, supplemented by interviews and a site visit to visually inspect the site for potential sources of contamination and signs of any release(s) of contaminants. Typical entities who commission a Phase I ESA report for a property include potential purchasers or tenants, current property owners, and lenders. The entity who commissions a specific Phase I ESA report is referred to in the report as the “User”.

The Phase I ESA must be completed by a qualified environmental professional who has the specific education, training, and relevant experience necessary to develop opinions and conclusions regarding conditions indicative of releases or threatened releases at or to the site. Sound professional judgement is key when preparing a Phase I ESA report, as many aspects of it rely on the interpretation and evaluation of site information and observations.

II. Why is a Phase I ESA important?

Conducting a thorough Phase I ESA is the first step of environmental due diligence when planning a property transaction. A Phase I ESA may identify conditions that the User would want to understand prior to acquiring or leasing the property, or providing financing, including conditions that could result in liability or which present a risk to human health if not properly addressed. For example:

- By being aware of known or likely areas of contamination at a site, a new owner can avoid activities that would expose them to liability under [Minnesota Statute 115B](#), such as spreading of soil contamination during earthmoving activities.
- Purchasing a site that has a petroleum storage tank would expose a new owner to liability for a petroleum tank release under [Minnesota Statute 115C](#).
- The presence of an unused well on a site may result in unexpected fees for properly sealing the well, as required by [Minnesota Statute 103I](#).
- Abandoned chemicals or equipment in a vacant building, signs of on-site waste disposal, and general poor housekeeping by a building occupant would all be identified by a thorough Phase I ESA.

Historical site use may not be evident by current site conditions; however, a Phase I ESA could identify historical site use that could be a risk or liability to the User. Understanding these and other potential environmental concerns at a site allows a prospective purchaser, tenant, or lender to understand and appropriately manage environmental liability associated with the site. If conditions of potential environmental concern are identified during a Phase I ESA, the Phase I ESA report typically recommends follow-up field work (e.g., a “Phase II ESA” or “site investigation”) to determine whether contamination associated with those RECs is present.

Another benefit of completing a thorough Phase I ESA is that it can provide protection from federal Superfund liability for potential hazardous substances at the site. A Phase I ESA that complies with the most current American Society for Testing and Materials (ASTM) International standard satisfies the U.S. Environmental Protection Agency’s (EPA) “All Appropriate Inquiries” rule, and therefore provides protection from potential liability under federal Superfund law as an “innocent landowner” or “bona fide prospective purchaser”. Note that certain aspects of the Phase I ESA must be completed within 180 days prior to purchase of the property to attain status as an “innocent landowner” or “bona fide prospective purchaser”. For more information about “All Appropriate Inquiries” and the importance of an ASTM compliant Phase I ESA, see the EPA’s [Brownfields All Appropriate Inquiries](#) webpage.

III. Content of a Phase I ESA report

A. ASTM standard

The standard content of a Phase I ESA report, for the purpose of conducting environmental due diligence and qualifying for certain landowner protections from federal Superfund liability, is provided in the ASTM International Standard E1527-21 “*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*” (ASTM E1527-21). The primary topics addressed in a Phase I ESA report, as identified in the ASTM standard, are listed below.

- Review of federal, state, tribal and local government records.
- Review of physical setting resources (e.g., topography, geology, hydrology).
- Review of historical use information, back to the property’s first developed use, or to 1940, whichever is earlier.
- Site reconnaissance (e.g., site visit to observe property and structures).
- Interviews with past and present owners, operators, and occupants with specific knowledge of previous site and surrounding property use.
- Interviews with state and/or local government officials.
- Identification of any significant data gaps that affect the ability of the environmental professional to recognize conditions indicative of releases or potential releases of contaminants.
- Assessment of the presence or likely presence of contamination at the site based on visual observation and historical research.
- User questionnaire, addressing topics such as:
 - Presence of environmental liens and activity and use limitations back to 1980.
 - Specialized knowledge or experience related to the property or nearby properties.
 - Relationship of the purchase price to the fair market value of the property, were it not contaminated.
 - Commonly known information about the property.

Certain conditions at a property building that may be of interest to the User, such as the presence of asbestos-containing building materials, radon, lead-based paint, and mold, are not required components of an ASTM compliant Phase I ESA report. If a User wants information about these non-scope conditions, they should make additional arrangements to evaluate these conditions.

For more information about the use and scope of an ASTM compliant Phase I ESA report, see the introductory information presented on the following ASTM website: [Standard Practice for Environmental Site Assessments: Phase I ESA](#). Note that the ASTM standard itself is a copyright publication that can be purchased from the ASTM website.

B. MPCA Brownfield Program requirements

A Phase I ESA report prepared to the ASTM standard contains a wealth of information about a site but may lack certain key elements that are useful to MPCA Brownfield Program staff during site review. This guidance document is not meant to reiterate detailed ASTM requirements, which are well-documented in the published standard, but rather to highlight certain information and details needed by the MPCA Brownfield Program, over and above the basic ASTM standard. Providing this information to Brownfield Program staff at the time of enrollment will allow a more efficient review of the submitted materials.

A Phase I ESA report must be provided with the Brownfield Program application unless the enrollment request is only for technical assistance for one of the following services/letters: Review of an active Leak Site; Leak Site Tank Removal Verification Letter; General Liability Letter and/or Lender Letter. The MPCA Brownfield Program will not process an application if a required Phase I ESA report has not been submitted.

1. Enhancements to ASTM content

The following items are not required by the ASTM standard but are needed by the MPCA Brownfield Program as part of the Phase I ESA report. If the Phase I ESA report does not include the following information, any missing items must be included in a Site Update Letter (described below), to be submitted along with the Phase I ESA report during program enrollment.

- **Historical records.** Review of historical records such as aerial photographs, historical fire insurance maps, topographic maps, and city directories is required by ASTM E1527-21. The MPCA Brownfield Program requires that a copy of all historical records be included in the Phase I ESA report. Aerial photographs and historical maps must show the outline of the brownfield site. Portions of the city directory that pertain to current or former site addresses must be highlighted for easy reference.
- **Local government records.** Include copies of pertinent local government records in the Phase I ESA report. Examples include historical building permit records, municipal assessor and engineering files pertaining to the availability of sewer and water services, county hazardous waste files, fire department files, etc.
- **High quality photographs of the site.** The MPCA Brownfield Program requires that high quality photographs, taken during the site reconnaissance, be included in the Phase I ESA report, to document observed RECs and the layout and condition of the building(s).
- **Site plan and potential sources of contamination.** A site figure(s) showing the layout of site features, activities, uses, and conditions is required by ASTM E1527-21. The Brownfield Program requires (at a minimum) the following specific items to be included on the site figure(s):
 - Location of current and former building footprints. If a site building has been expanded over time, identify the original footprint of the building vs. subsequent additions, with dates of construction as known. Identify location of partial basement if present.
 - Layout of the interior space of current buildings (and former buildings if known). Identify current and former use(s) of each area (e.g., manufacturing/service area vs. office space, individual tenant spaces for multi-tenant commercial/industrial buildings, etc.). Label tenant spaces of particular interest, such as a current or former drycleaner or current location of daycare center, etc.
 - Interior and exterior potential sources of contamination, based on records review, interviews, and the site reconnaissance. Potential sources of contamination may include but are not limited to current and former floor drains, sumps, petroleum or chemical storage tanks, stained areas, processing lines and components, areas of chemical storage and use (e.g., parts washer, equipment, etc.), and areas of on-site waste disposal.

- **Previous sampling data.** If environmental samples have been collected previously at the site, include a site figure that shows the location of those samples relative to identified potential sources of contamination. Also provide data summary tables for each sampled media that include the historical soil, groundwater, and soil vapor data. If previous sampling data includes sampling points outside the current site boundary, the data tables should be annotated, or the relevant data should be shown in a new table.
- **Emerging contaminants.** The Phase I ESA report must include an evaluation of the known or likely presence of per- and polyfluoroalkyl substances (PFAS), based on site history and location. Refer to the [MPCA PFAS Remediation Guidance](#) for details.

2. Report format

Documents submitted to the MPCA are considered public unless otherwise classified by the Minnesota Data Practices Act. Do not submit a Phase I ESA report marked as “Confidential”.

- The Phase I ESA report must be signed by the environmental professional(s), as defined by ASTM E1527-21.
- All items in the table of contents should have bookmarks, including individual appendices, to easily navigate between sections. Before submitting the Phase I ESA report to the Brownfield Program, please verify the bookmarks work.
- The preferred electronic file format is Adobe Acrobat portable document format (PDF). Each report or document should be submitted as a *single, unprotected, unlocked, final* PDF file. Do not submit a Phase I ESA report marked as “Draft”.
- Copies of previous environmental reports can be uploaded separately during program enrollment, or they can be included as Appendices to the Phase I ESA report. If the latter, individual reports must be bookmarked.
- Limit the file name to less than 65 characters. Remove company-specific project numbers. Use the following nomenclature:

YYYY-MM-DD_Phase I ESA_site name.pdf
 Example: 2023-02-25_Phase I ESA_Aurora Business Park.pdf

3. Site update letter

If the enhanced content described in Section B.1 is not included in the Phase I ESA report, a site update letter is required at the time of MPCA Brownfield Program enrollment, to provide that content. Other items to potentially address in the site update letter, depending on the age of the Phase I ESA report, are described below.

- *For a Phase I ESA report up to one year old:* If site circumstances have changed since the report was prepared, the site update letter must discuss those changes (e.g., changes in ownership, site use, occupancy, configuration, etc.).
- *For a Phase I ESA report older than one year:* In certain circumstances, such as when site conditions have remained the same or are minimally changed, the MPCA Brownfield Program may accept a Phase I ESA report that is older than one year. A site update letter is required in this situation. The letter must either discuss any changes since the Phase I ESA report was prepared or include a specific statement confirming that conditions have not changed and the Phase I ESA report, as written, remains representative of current site conditions. Note that Brownfield Program staff, after review of the Phase I ESA report and site update letter, may still require completion of an updated Phase I ESA report.

C. Tips for State Agency Records

1. For MPCA records, a good place to start is [What's in My Neighborhood](#) (WIMN), the MPCA's GIS-based interactive map that shows properties that have a current or past relationship to MPCA. In addition to seeing if the subject property has a relationship with the MPCA, nearby properties with an MPCA file can be identified and evaluated. If a site of interest is identified on WIMN, click on the map symbol, and then in the pop-up box, click on the "More Info" link.
 - To see a subset of project records that may be available to download, click on the "Documents" tab.
 - To request a complete copy of a project file, including all reports and correspondence for the site, submit an [Information request form](#).
 - To find information about current or past hazardous waste generators at a site, click on the "Activity Overview" tab, scroll down to the "Hazardous Waste" activity (if any), and click on "More Detail". Scroll down and click on the "HW Generator License Application Data" link. Use the electronic form to search by year for the type of hazardous wastes generated, waste codes, and reported amount.
2. The MPCA's [Minnesota Groundwater Contamination Atlas](#) has information about select sites with groundwater contamination, including plume maps, site histories, and investigation and cleanup activities.
3. The MPCA's [Institutional Controls in Minnesota](#) website is an interactive map showing the location of all recorded institutional controls for MPCA sites.
4. The [Minnesota Department of Health \(MDH\) Well Index](#) is an interactive map of known public, domestic, irrigation, and monitoring wells and indication of their status.